

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: io LED

Report Number: P282529

Luminaire Tested: **LDA2B109727D010 EU2B10SP159727 2LBALPINSQ1MMS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P282529
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-908-7)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA2B109727D010 EU2B10SP159727 2LBALPINSQ1MMS
Description: PORTFOLIO 2IN ADJ 1000 LUMEN LED LUMINAIRE WITH SPOT OPTIC AND 2in Adj SQ Pinhole w-lens, MMS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 752.6 lumens
Efficiency: N/A
Efficacy: 75.3 lumens/watt
Spacing Criteria (0/90/45): 0.32 / 0.3 / 0.32
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

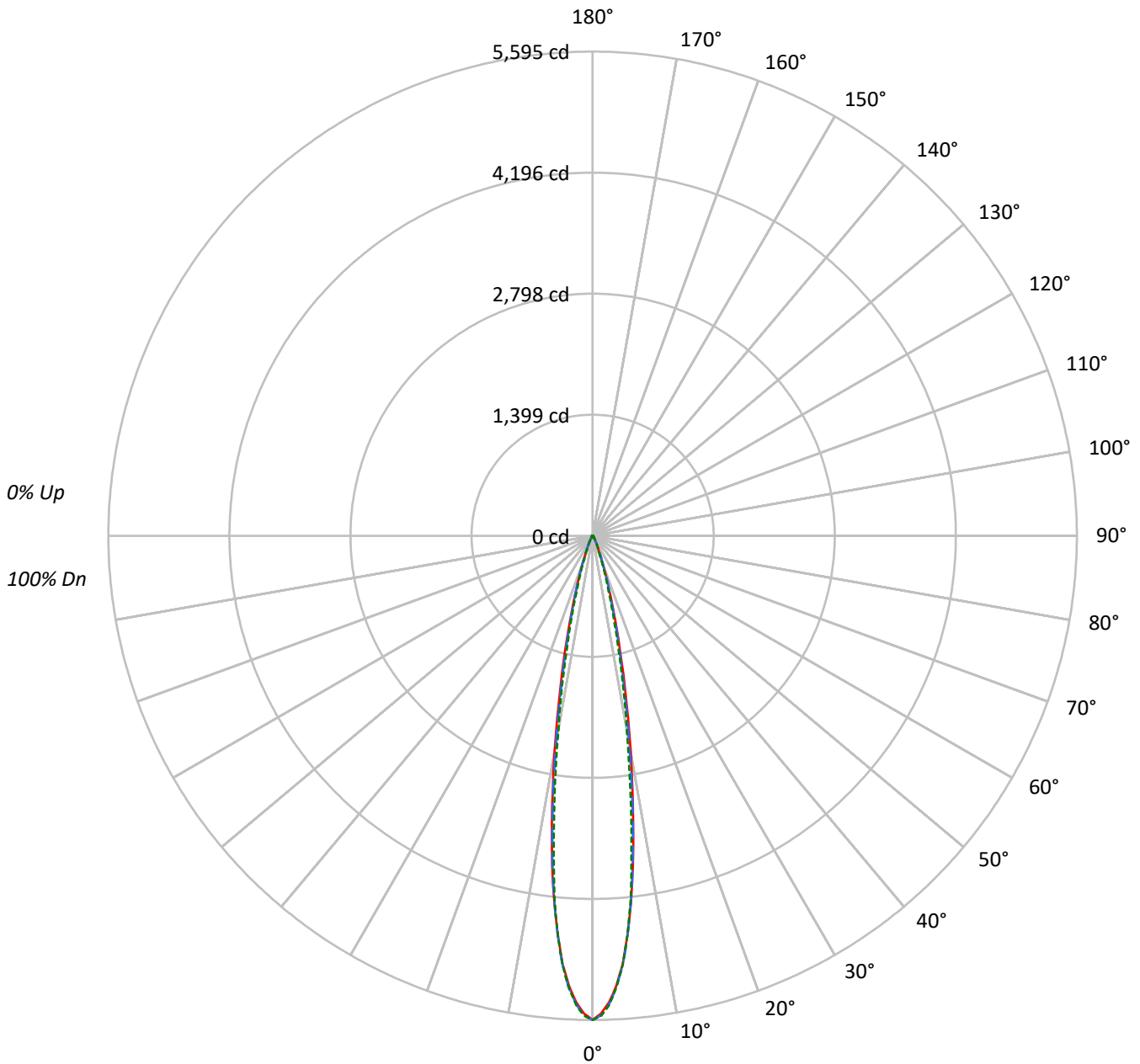
Input Watts (W): 10
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																																																
RC	80									50									30									10									0																																							
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																																														
RCR																																																																												
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100									100																																																	
1	115	113	111	109	113	111	109	107	107	105	104	103	102	101	100	99	98	96	95	94	92	91	89	87	85	83	81	79	77	75	73	71	69	67	65	63	61	59	57	55	53	51	49	47	45	43	41	39	37	35	33	31	29	27	25	23	21	19	17	15	13	11	9	7	5	3	1	0								
2	111	108	105	102	109	106	103	101	103	101	99	100	98	97	98	96	95	94	92	91	89	87	85	83	81	79	77	75	73	71	69	67	65	63	61	59	57	55	53	51	49	47	45	43	41	39	37	35	33	31	29	27	25	23	21	19	17	15	13	11	9	7	5	3	1	0										
3	108	104	100	97	106	102	99	97	100	97	95	98	95	94	98	95	94	92	91	89	87	85	83	81	79	77	75	73	71	69	67	65	63	61	59	57	55	53	51	49	47	45	43	41	39	37	35	33	31	29	27	25	23	21	19	17	15	13	11	9	7	5	3	1	0											
4	105	100	96	93	104	99	96	93	97	94	92	95	93	91	94	92	90	89	87	85	83	81	79	77	75	73	71	69	67	65	63	61	59	57	55	53	51	49	47	45	43	41	39	37	35	33	31	29	27	25	23	21	19	17	15	13	11	9	7	5	3	1	0													
5	102	97	93	90	101	96	93	90	95	91	89	93	90	88	92	89	88	87	85	83	81	79	77	75	73	71	69	67	65	63	61	59	57	55	53	51	49	47	45	43	41	39	37	35	33	31	29	27	25	23	21	19	17	15	13	11	9	7	5	3	1	0														
6	100	94	90	88	99	94	90	87	92	89	87	91	88	86	90	88	86	85	83	81	79	77	75	73	71	69	67	65	63	61	59	57	55	53	51	49	47	45	43	41	39	37	35	33	31	29	27	25	23	21	19	17	15	13	11	9	7	5	3	1	0															
7	98	92	88	85	97	91	88	85	90	87	85	89	86	84	88	86	84	83	81	79	77	75	73	71	69	67	65	63	61	59	57	55	53	51	49	47	45	43	41	39	37	35	33	31	29	27	25	23	21	19	17	15	13	11	9	7	5	3	1	0																
8	96	90	86	83	95	89	86	83	88	85	83	87	85	82	87	84	82	81	79	77	75	73	71	69	67	65	63	61	59	57	55	53	51	49	47	45	43	41	39	37	35	33	31	29	27	25	23	21	19	17	15	13	11	9	7	5	3	1	0																	
9	94	88	84	81	93	87	84	81	86	83	81	86	83	81	85	82	81	79	77	75	73	71	69	67	65	63	61	59	57	55	53	51	49	47	45	43	41	39	37	35	33	31	29	27	25	23	21	19	17	15	13	11	9	7	5	3	1	0																		
10	92	86	82	80	91	85	82	80	85	82	79	84	81	79	84	81	79	77	75	73	71	69	67	65	63	61	59	57	55	53	51	49	47	45	43	41	39	37	35	33	31	29	27	25	23	21	19	17	15	13	11	9	7	5	3	1	0																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2760359	2760359	2760359
5°	2290019	2297448	2288731
10°	1267461	1221672	1138060
15°	513064	490744	435734
20°	171893	182236	147584
25°	65378	65650	62112
30°	29339	28826	27858
35°	14214	12648	10058
40°	9403	11915	8308
45°	2372	3907	3558
50°	691	998	1305
55°	5935	5161	8085
60°	8486	6808	11051
65°	3969	10507	10040
70°	3750	3029	3750
75°	1716	4003	11437
80°	19604	26707	24434
85°	0	11887	14718



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	366.4	48.7
10°-20°	277.6	36.9
20°-30°	63.1	8.4
30°-40°	18.7	2.5
40°-50°	6.2	0.8
50°-60°	5.5	0.7
60°-70°	6.6	0.9
70°-80°	4.2	0.6
80°-90°	4.4	0.6
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	707.1	94.0
0°-40°	725.8	96.4
0°-60°	737.5	98.0
0°-90°	752.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	752.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5595	5595	5595	5595	5595	
5°	4624	4660	4639	4578	4621	371
15°	1004	1018	961	871	853	292
25°	120	129	121	119	114	63
35°	24	26	21	24	17	19
45°	3	10	6	10	5	5
55°	7	10	6	9	9	3
65°	3	7	9	9	9	4
75°	1	3	2	4	6	2
85°	0	0	2	2	3	3
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5595.0	5595.0	5595.0	5595.0	5595.0
1°	5522.9	5545.3	5543.1	5534.1	5550.0
2°	5395.9	5423.0	5420.4	5400.7	5429.0
3°	5209.7	5233.7	5229.9	5201.5	5232.4
4°	4960.8	4988.3	4977.6	4935.1	4974.6
5°	4624.0	4660.5	4639.0	4578.5	4621.4
6°	4250.7	4281.6	4247.7	4167.4	4209.5
7°	3832.7	3852.0	3807.4	3704.4	3676.1
8°	3376.6	3401.9	3339.7	3219.5	3188.6
9°	2940.6	2949.2	2873.7	2745.8	2706.8
10°	2530.0	2523.5	2438.6	2309.0	2271.7
11°	2140.8	2132.2	2042.5	1922.8	1934.8
12°	1786.8	1803.5	1699.2	1590.7	1592.8
13°	1495.8	1497.6	1407.9	1304.5	1298.5
14°	1224.7	1240.5	1163.7	1071.0	1053.9
15°	1004.5	1018.3	960.8	870.6	853.1
16°	804.1	821.3	780.1	698.6	675.4
17°	647.5	669.4	642.4	574.1	547.5
18°	517.9	534.7	528.2	457.8	436.0
19°	408.9	432.1	433.8	375.0	348.9
20°	327.4	348.4	347.1	301.7	281.1
22.5°	187.9	199.1	199.5	178.1	166.1
25°	120.1	129.2	120.6	119.3	114.1
26°	104.3	111.6	102.1	102.1	97.4
27°	84.5	91.0	82.0	85.8	79.4
28°	71.2	78.1	70.4	69.5	68.7
29°	59.2	65.7	55.8	60.1	57.5
30°	51.5	56.2	50.6	57.1	48.9
32.5°	39.9	43.8	33.9	42.9	32.2
35°	23.6	26.2	21.0	24.5	16.7
37.5°	24.5	25.3	22.7	25.3	23.6
40°	14.6	15.0	18.5	18.5	12.9
42.5°	13.7	13.3	8.2	12.9	10.3
45°	3.4	9.9	5.6	9.9	5.1
47.5°	2.6	3.4	3.4	6.9	6.9
50°	0.9	3.4	1.3	2.6	1.7
52.5°	0.0	8.2	1.7	6.0	5.1
55°	6.9	9.9	6.0	9.0	9.4
57.5°	0.9	6.9	3.4	7.3	5.1
60°	8.6	11.6	6.9	12.4	11.2
62.5°	0.9	7.7	9.0	6.9	6.0
65°	3.4	7.3	9.0	8.6	8.6
67.5°	4.3	7.3	5.6	5.6	7.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
75°	0.9	3.0	2.1	3.9	6.0
77.5°	0.9	3.4	3.0	6.9	5.1
80°	6.9	7.7	9.4	12.4	8.6
82.5°	6.0	6.0	9.4	6.9	5.1
85°	0.0	0.0	2.1	2.1	2.6
87.5°	0.0	1.7	4.3	3.4	6.0
90°	0.0	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - - 90°-270°







70°	2.6	0.9	2.1	2.1	2.6
72.5°	0.9	3.9	3.4	2.1	4.3



(END OF REPORT)